

Beall Avenue Safety Enhancements Study

City of Rockville

May 18th, 2023

Agenda

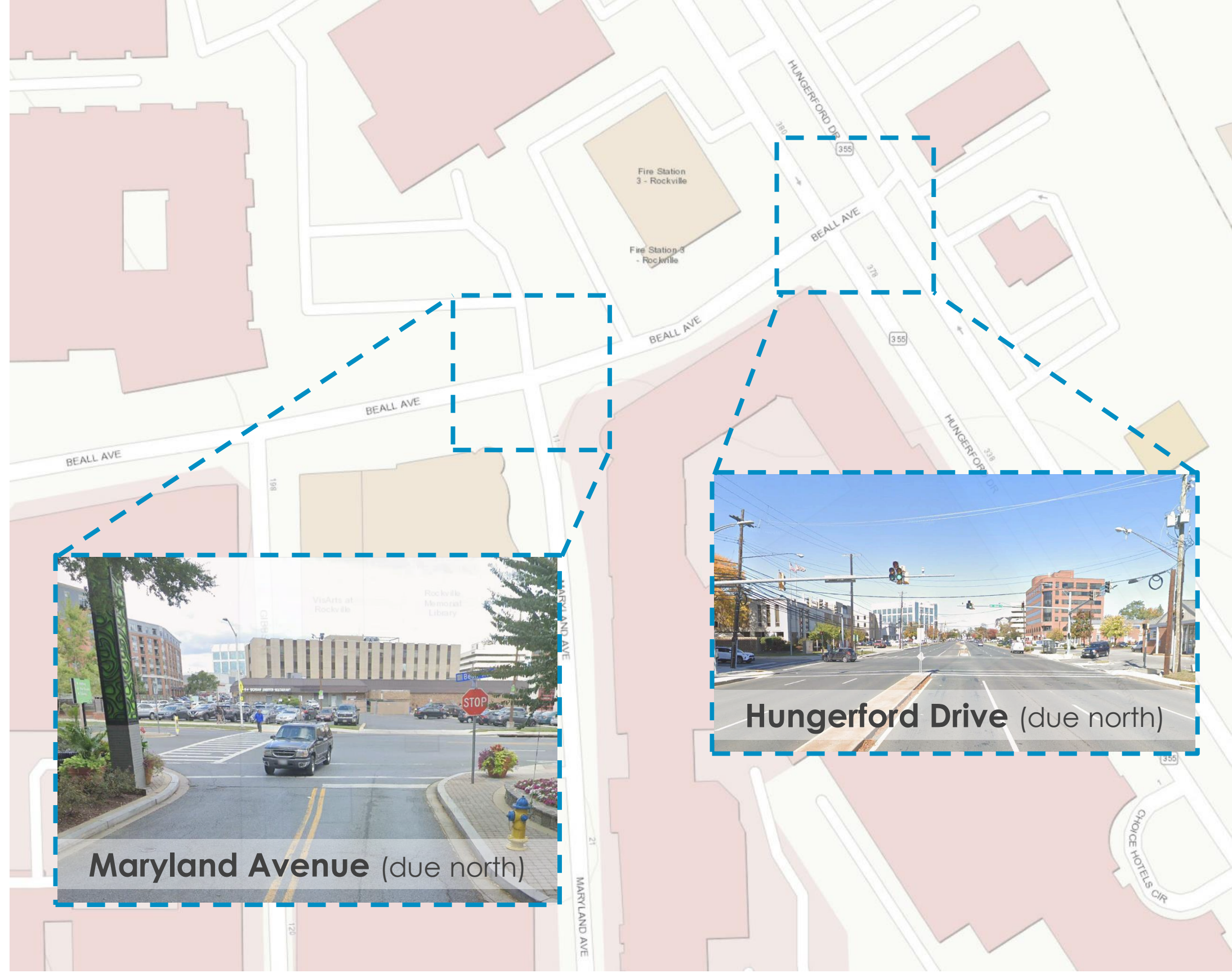
- » Project Overview
- » Intersection and Corridor Alternatives
 - » Repurposed Travel Lanes
 - » Roundabout
 - » MD 355 & Beall Avenue
 - » Traffic Impact

Project Overview

Beall Avenue Safety Enhancements Study

Study Area

- » Beall Ave and MD 355 (Hungerford Drive)
 - » High-speed, high-volume
 - » Signalized
 - » Bus Stop
- » Beall Avenue and Maryland Avenue
 - » Low-speed, pedestrian activity
 - » Unsignalized
 - » Bike facilities
 - » Crosswalk



Schedule

	November 2022	December 2022	January 2023	February 2023	March 2023	April 2023	May 2023
Task 1: Project Kick-Off and Ongoing Management							
Task 2: Existing Conditions Review							
Task 3: Identification of Recommended Strategies							
Task 4: Development of Conceptual Designs							

Intersection and Corridor Alternatives

Beall Avenue Safety Enhancements Study

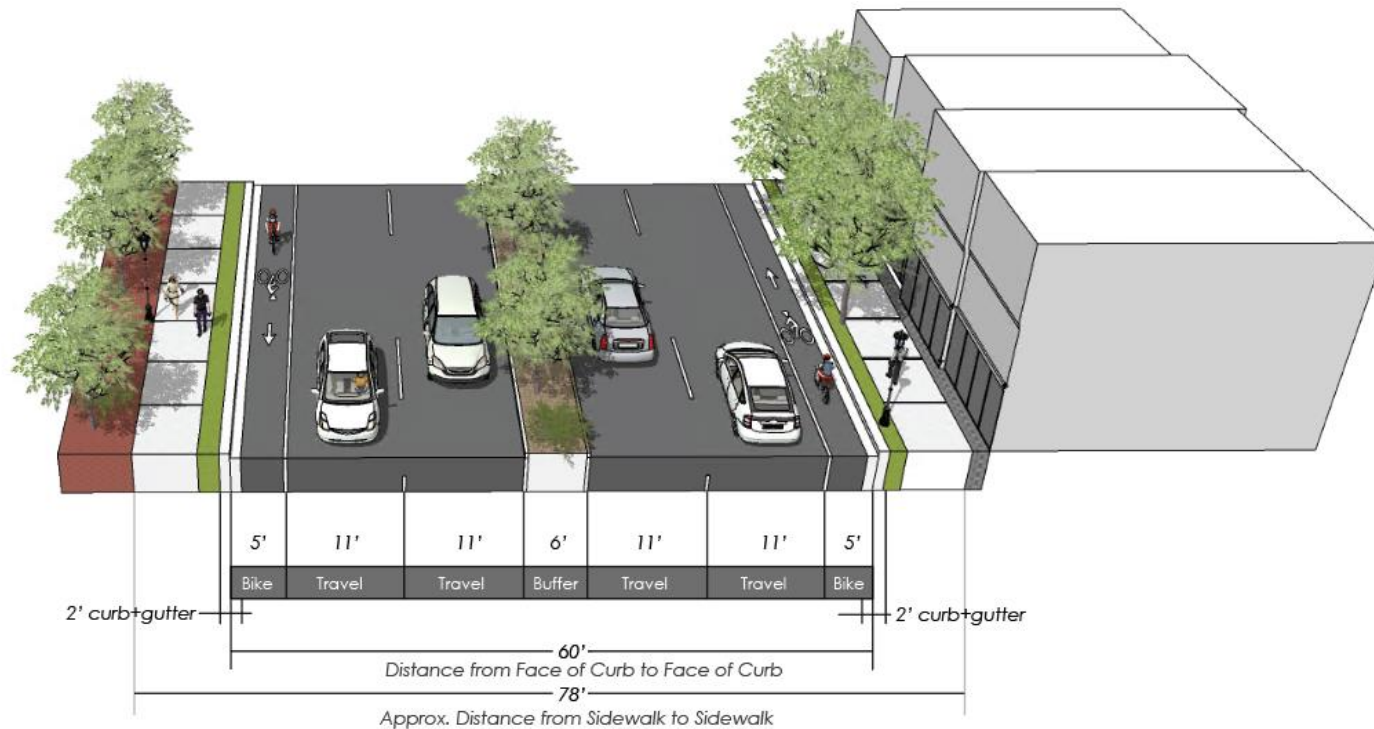
Summary of Corridor Concept Alternatives

Alternative	Lane Configuration	Bicycle Treatment	Pedestrian Treatment	Parking	Curb Reconstruction	Median
Beall Avenue Corridor (N Washington Street to MD 355)						
Alternative 1: Repurposed Travel Lanes (Quick Build)	Two 11' lanes	5'-5.5' protected bike lane; 3' buffer	Painted curb extensions	North side	No	Maintain existing
Alternative 2: Landscaped Median with Protected Bike Lanes	Two 11' lanes	5.5'-6' protected bike lane; 3'-4' buffer	Pedestrian refuges	North side	Yes	8-10'

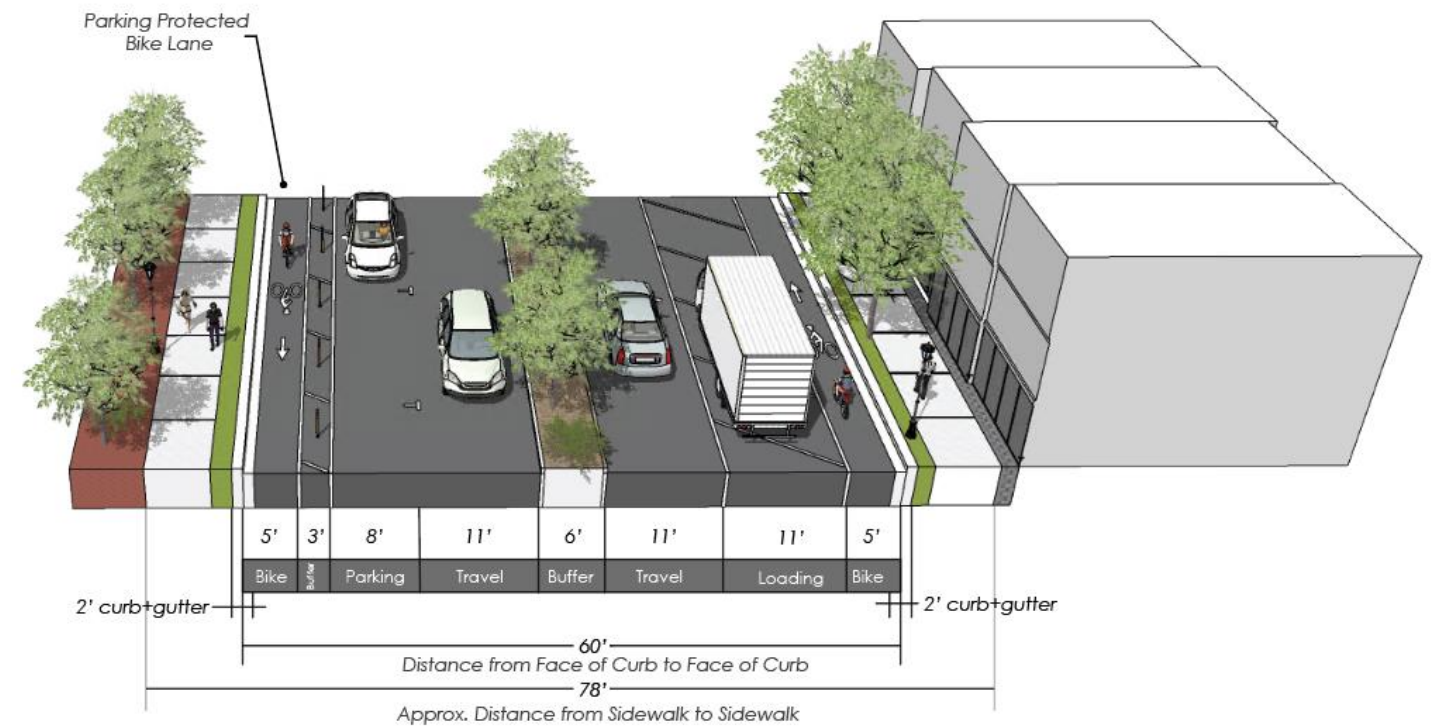
Alternative 1: Repurposed Travel Lanes

N Washington Street to Maryland Avenue

Existing



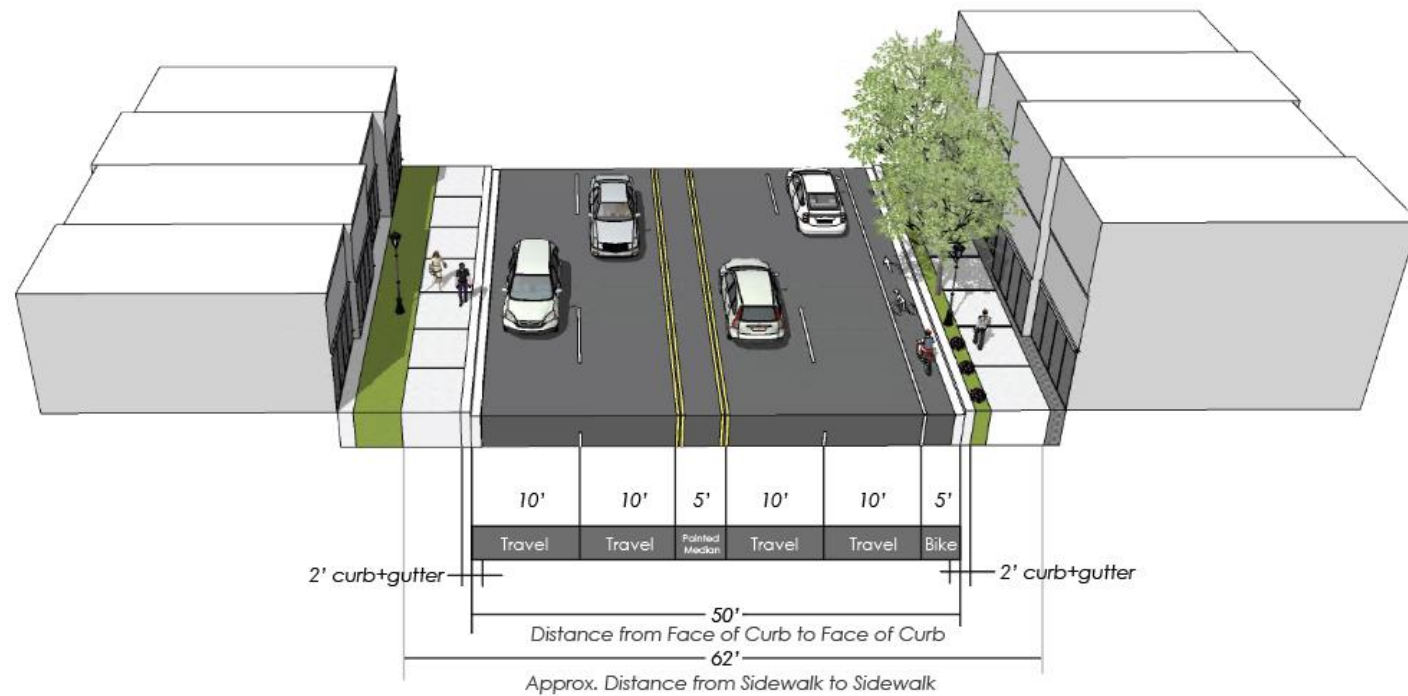
Proposed



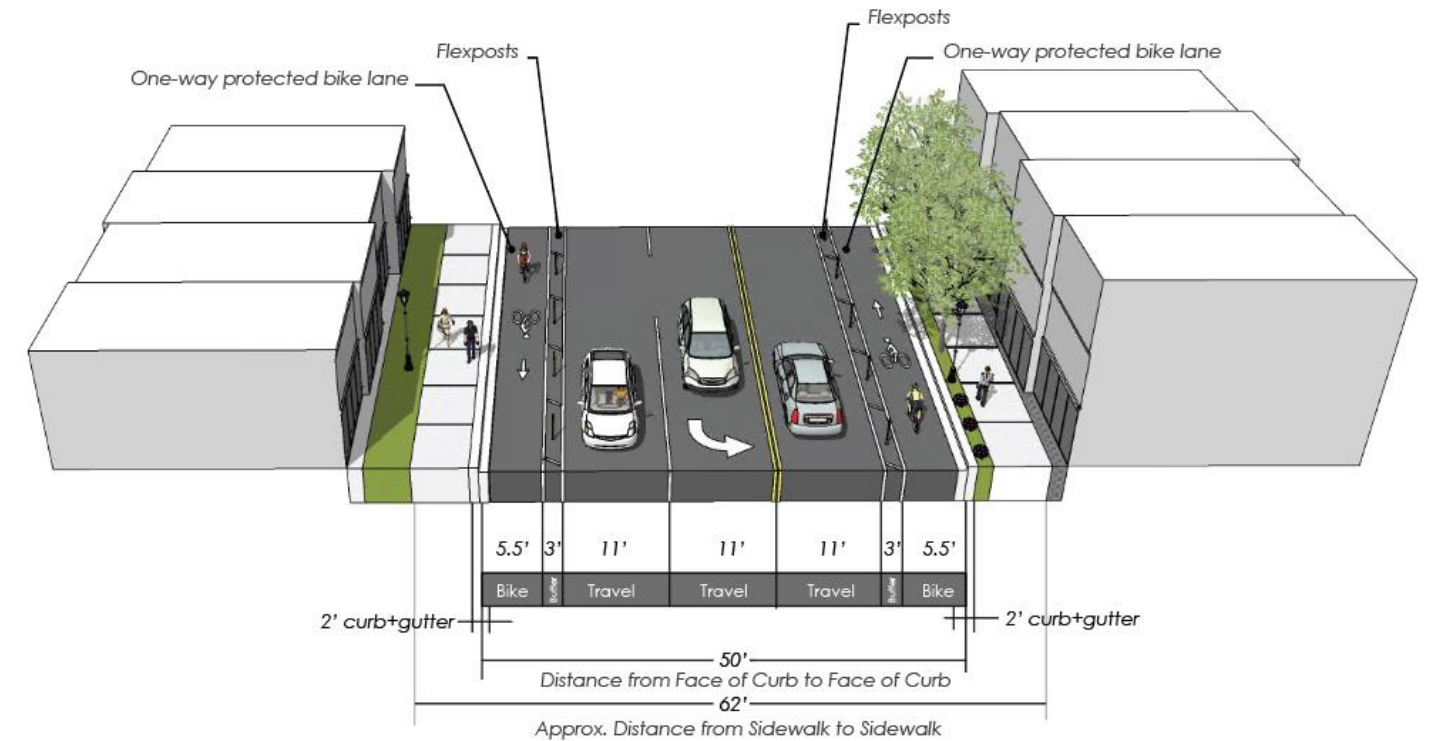
Alternative 1: Repurposed Travel Lanes

Maryland Avenue to MD 355

Existing



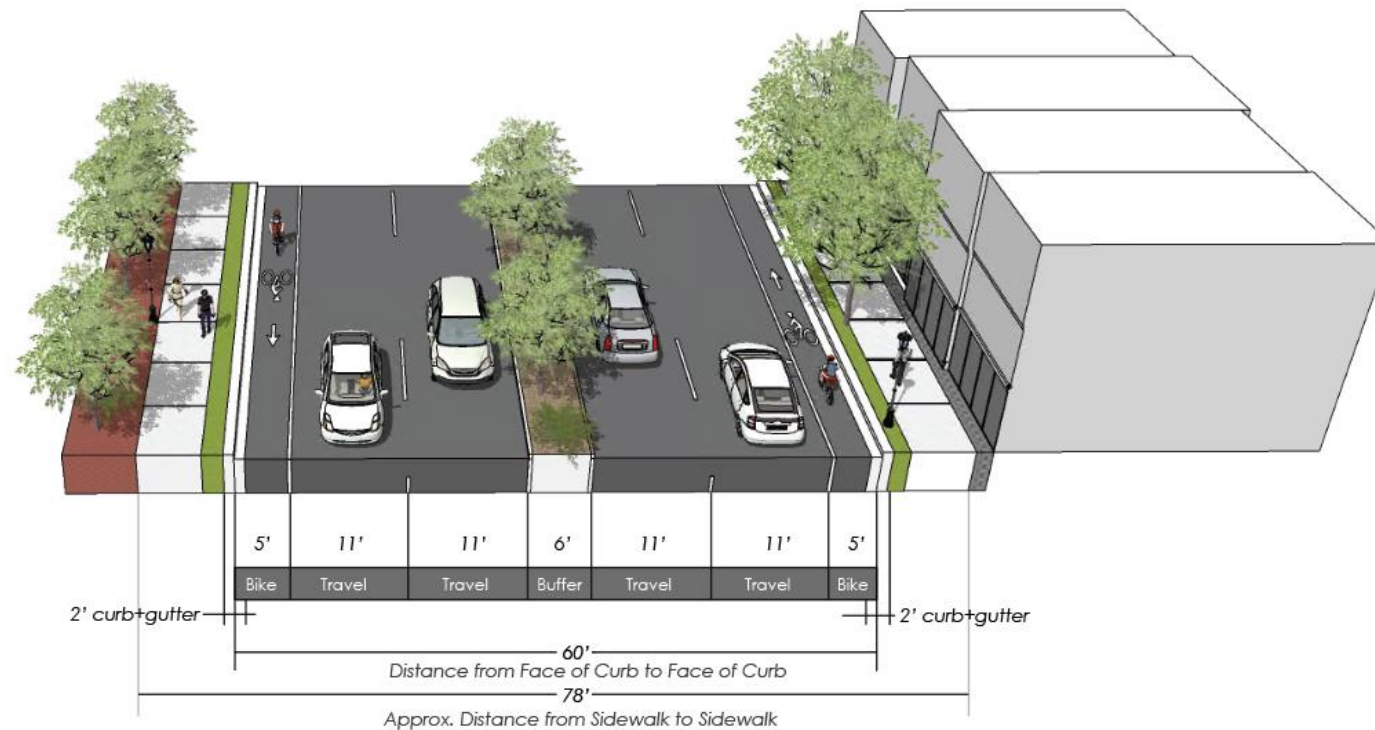
Proposed



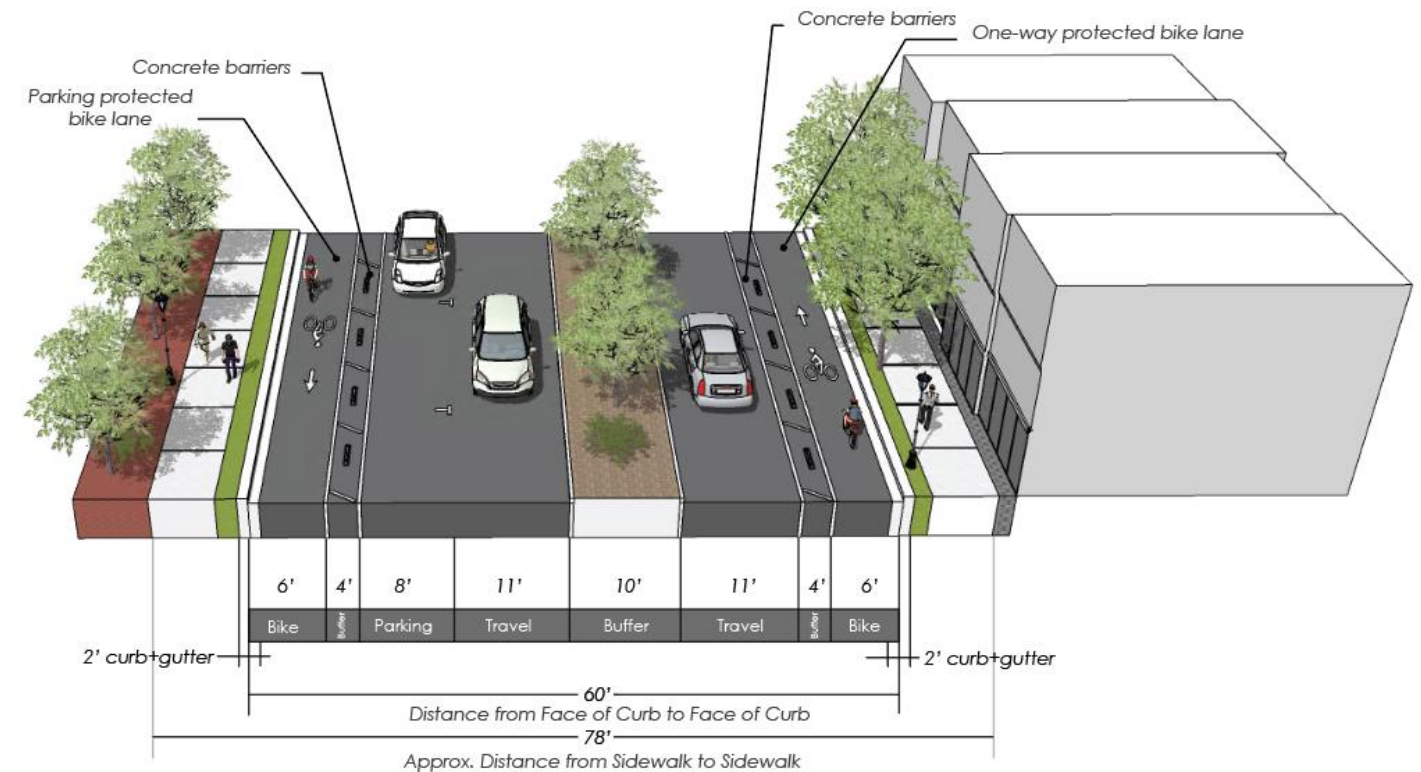
Alternative 2: Widen Landscaped Median

N Washington Street to Maryland Avenue

Existing



Proposed



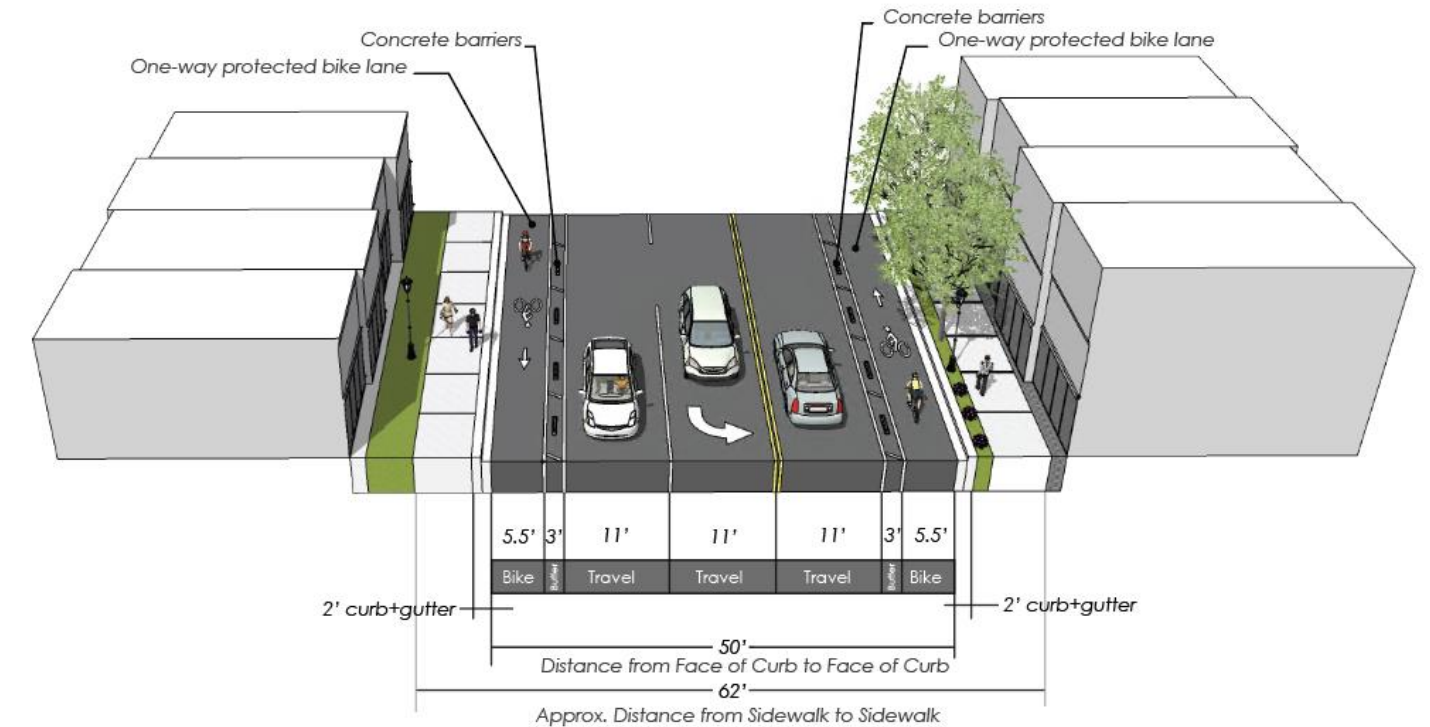
Alternative 2: Widen Landscaped Median

Maryland Avenue to MD 355

Existing



Proposed



Summary of Intersection Concept Alternatives

Alternative	Lane Configuration	Bicycle Treatment	Pedestrian Treatment	Parking	Curb Reconstruction	Median	Signal Modifications
Beall Avenue and Maryland Avenue							
Alternative 1: Near-term, quick-build traffic calming	Two lanes	Protected bike lanes	Traffic calming, curb extensions	n/a	No	n/a	n/a
Alternative 2: Roundabout	Two lanes	Protected bike lanes	Additional crossing on east leg	n/a	Yes	n/a	n/a
Beall Avenue and MD 355							
Pedestrian refuge	No change	Crossing safety improvement	Crossing safety improvement	n/a	Yes	Extend	No
Bike box	No change	Bicycle priority	None	n/a	No	n/a	No
No right turn on red	No change	Reduce conflict	Reduce conflict	n/a	No	n/a	No
Permissive flashing yellow arrow	No change	n/a	n/a	n/a	No	n/a	Yes

The Spot Asian Food Hall

Dawson's Market

Rockville Volunteer Fire Department, Inc.

Rockville Public Library

BEALL AVENUE

MARYLAND AVENUE

HUNGERFORD DRIVE (MD 355)

Shared use path (FLASH BRT)

Southbound bus only lane (FLASH BRT)

Bike box

Flexposts

Loading dock driveways

Curbside loading area

Bus boarding platform

Extended median striping

Parking protected bike lane

Stop bar and stop sign

One-way protected bike lane

Conflict marking at driveways

Flexposts

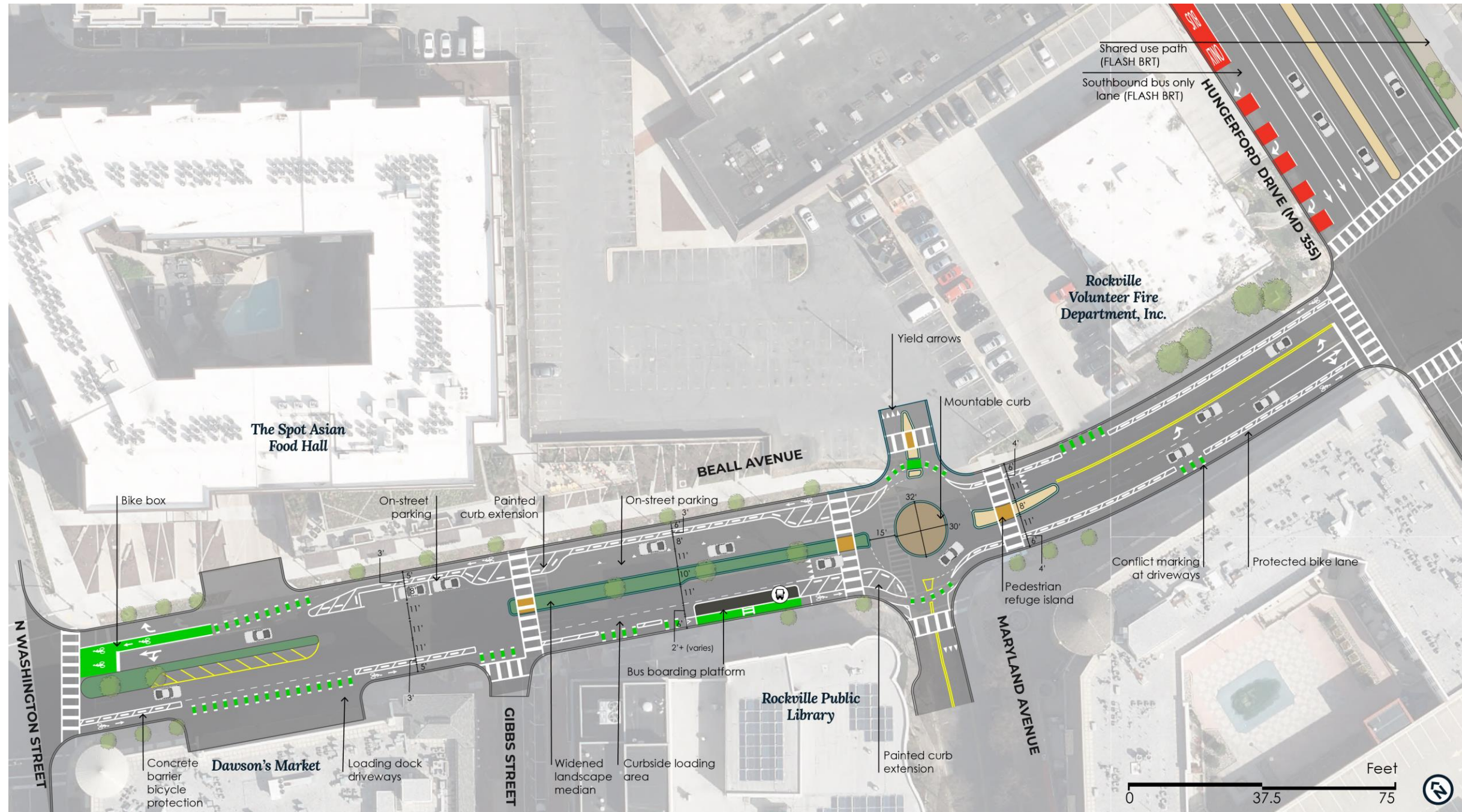
One-way protected bike lane

Dimensions: 5', 3', 8', 11', 6', 11', 5', 3', 5.5', 11', 11', 5.5', 3'

Scale: 0, 37.5, 75 Feet

North Arrow

Alternative 2: Roundabout



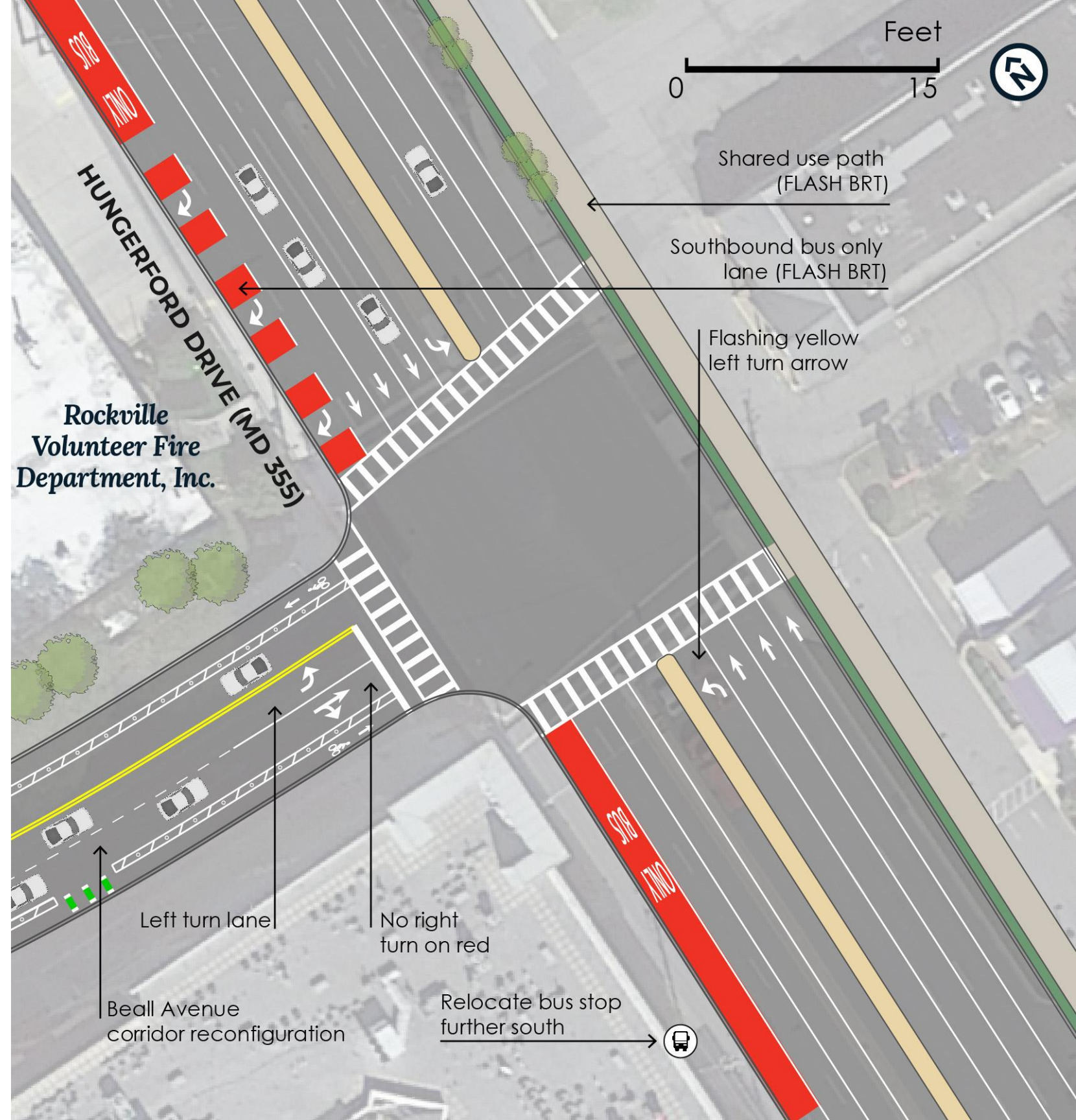
Beall Avenue & MD 355

» Beall Avenue & MD 355

» MD 355 Flash Bus Rapid Transit project

» *Seeks to provide upgraded bus service along MD 355*

» Improvement recommendations build upon these plans



Beall Ave and Maryland Ave

Intersection	Approach Label	Approach/ Movement	Existing Conditions			Approach/ Movement	Build Conditions (Alternative 1)			Build Conditions (Alternative 2)		
							TWSC with dedicated WBL			Single Lane Roundabout		
			PM Peak				PM Peak			PM Peak		
			Delay (veh/sec)	LOS	95th Queue Length (ft)		Delay (veh/sec)	LOS	95th Queue Length (ft)	Delay (veh/sec)	LOS	95th Queue Length (ft)
Beall Ave & Maryland Ave	Beall Ave	EBLT	1.9	A	1	EBLTR	0.9	A	1	4.8	A	26.8
		EB Overall	0.8	A	-	EB Overall	0.9	A	-	4.8	A	-
	Beall Ave	WBLT	3.2	A	3	WBL	7.8	A	3	4.9	A	29.2
		WBTR	0.0	A	0	WBTR	0.0	A	0	-	-	
		WB Overall	1.7	A	-	WB Overall	1.6	A	-	4.9	A	-
	Maryland Ave	NBLTR	13.5	B	37	NBLTR	14.5	B	41	5.1	A	22.6
		NB Overall	13.5	B	-	NB Overall	14.5	B	-	5.1	A	-
	Parking Entrance	SBLTR	14.9	B	15	SBLTR	16.1	C	16	4.2	A	6.2
		SB Overall	14.9	B	-	SB Overall	16.1	C	-	4.2	A	-
	Overall Intersection			5.6	A	-		6.0	A	-	4.9	A

Proposed Improvements Benefits:

- » All movements in both alternatives operate at LOS C or better.
- » The queue length increases along the mainline in the roundabout option by one vehicle length.

Traffic Impacts Summary

» Goal

- » Improve overall safety and minimally affect traffic operations

» Traffic analyses were performed

- » No negative traffic impacts are anticipated

- » *Level of Service, Queueing are operating at ideal conditions at both intersections*

- » Signal optimization

» Benefits of Renovated Corridor/Intersections

Questions and Discussion

